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The szegö function on a non-rectifiable arc

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Abstract

Let γ be a simple Jordan arc in the complex plane. The Szegö function, by definition, is a holomorphic in C\γ function with a prescribed product of its boundary values on γ. The problem of finding the Segö function in the case of piecewise smooth γ was solved earlier. In this paper we study this problem for non-rectifiable arcs. The solution relies on properties of the Cauchy transform of certain distributions with the support on γ. © Allerton Press, Inc., 2012.

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Keywords

Cauchy transform, Distribution, Non-rectifiable arc, Riemann boundary-value problem, Szegö function